

Report Date: 30 Jun 2014

Summary Report for Individual Task
551-88L-3062
Troubleshoot a Battery Charging System
Status: Approved

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD5 - This product/publication has been reviewed by the product developers in coordination with the [installation/activity name] foreign disclosure authority. This product is releasable to students from all requesting foreign countries without restrictions.

Condition: Given a battery charging system aboard a vessel, at sea, at anchor or moored alongside a pier, day or night, under all sea and weather conditions, while wearing appropriate PPE, (i.e. hearing protection, Nitrile gloves, eye protection, etc.), lock out tag out kit and a marine rail tool box.

Standard: The Soldier correctly troubleshoots a battery charging system aboard an Army vessel, IAW the appropriate Technical Manual and local SOPs, without injury to self or others and without damage to equipment.

Special Condition: None

Safety Risk: Medium

MOPP 4:

Task Statements

Cue: None

DANGER

None

WARNING

None

CAUTION

None

Remarks: None

Notes: None

Performance Steps

1. Demonstrate basic knowledge for troubleshooting procedures of a battery charging system.

a. Troubleshooting battery-powered systems can become complex.

(1) Electrical problems can be identified with a good initial inspection.

(2) Burned out electrical components have a distinctive electrical smell and charred wires and connections are readily identified.

(3) Once these areas are identified and corrected, further tests are needed to determine the reason for this condition.



LaMarche Battery Charger

Figure 551-88L-3062_01

b. Regularly check all connections from the battery throughout the entire electrical system.

(1) All connections must be clean and tight.

(2) Vibration and oxidation account for a large percentage of electrical malfunctions.

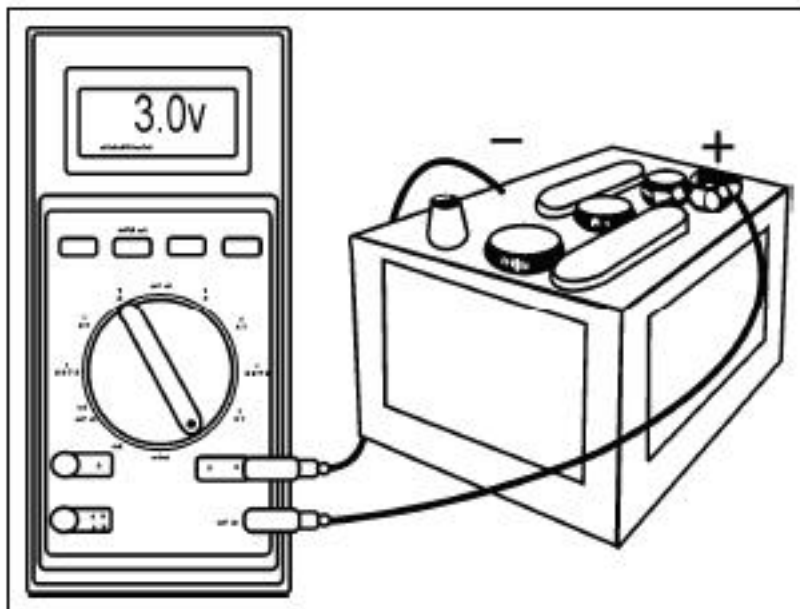
c. Any increase in resistance in the circuit reduces the current throughout the entire circuit.

(1) With a reduction of electrons (and their magnetic influence); motors, solenoids, and other electrical components will function irregularly.

(2) Some of the more obvious resistance increases are due to improper or dirty connections and corroded cable ends.

2. Demonstrate basic knowledge for troubleshooting battery voltage.

a. A fully charged lead-acid battery has 2.33 volts per cell.



Testing Battery Charge
Figure 551-88L-3062_02

(1) A charged battery that shows an extremely high voltage is suspect of being deficient.

(2) If these voltages are exceeded, the battery is unsatisfactory and probably sulfated.

b. The batteries must be operational and completely charged before testing any other electrical component.

c. Charge the existing battery bank or substitute the batteries when other circuit components are suspect.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: None

Evaluation Preparation: None

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Demonstrated basic knowledge for troubleshooting procedures of a battery charging system.			
2. Demonstrated basic knowledge for troubleshooting battery voltage.			
a. Checked voltage of each battery.			
b. Recorded reading of each battery.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	TC 55-509-1	Marine Electricity	No	No

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
551-88L-1036	Demonstrate Basic Knowledge of a Battery Charging System	551 - Transportation (Individual)	Approved

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551-88L-1036	Demonstrate Basic Knowledge of a Battery Charging System	551 - Transportation (Individual)	Approved
551-88L-1036	Demonstrate Basic Knowledge of a Battery Charging System	551 - Transportation (Individual)	Analysis

Supported Collective Tasks : None

ICTL Data :

ICTL Title	Personnel Type	MOS Data
88L40 Watercraft Engineer	Enlisted	MOS: 88L, Skill Level: SL4, Duty Pos: TGB, LIC: EN, SQL: O
88L30 Watercraft Engineer	Enlisted	MOS: 88L, Skill Level: SL3, Duty Pos: TFR, LIC: EN